

**Notice of Allowability**

Application No.

10/619,933

Examiner

James J. Leybourne

Applicant(s)

LOWER, THORSTEN

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment received 5 May 2005.
2. ☒ The allowed claim(s) is/are 2,6-15 and 17-67.
3. ☒ The drawings filed on 26 January 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION**

1. According to the Amendment received 5 May 2005, claims 2, 6-15, 17-28 and 31-35 have been amended; claims 1, 3-5, and 16 have been canceled; and claims 36-66 have been added.

***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Claim 2 was replaced with the following:

-- Claim 2 (amended). A method for measuring the intensity profile of an electron beam, in which the electron beam is directed by relative movement between the electron beam and a measuring structure on to different points of the latter which have different back-scattering properties, wherein a stream of electrons scattered in the reverse direction by the measuring structure is measured as a function of the relative movement of the electron beam and the measuring structure and wherein the measuring structure includes at least one opening, which allows the electron beam to pass through. --

Claim 6 was replaced with the following:

-- Claim 6 (amended). A method for measuring the intensity profile of an electron beam, in which the electron beam is directed by relative movement between the electron beam and a measuring structure on to different points of the latter which have different back-scattering properties, wherein a stream of electrons scattered in the reverse direction by the measuring structure is measured as a function of the relative movement of the electron beam and the measuring structure and wherein the measuring structure is formed by a needle, which includes at least one back-scattering surface which reflects the electron beam at least partially. --

Claim 20 was replaced with the following:

-- Claim 20 (amended). Method for measuring the intensity profile of an electron beam in which the electron beam is directed by relative movement between the electron beam and a measuring structure on to different points of the latter which have different back-scattering properties, wherein a stream of electrons scattered in the reverse direction by the measuring structure is measured as a function of the relative movement of the electron beam and the measuring structure and wherein the measuring structure is in the form of a grid, wherein at least a considerable portion of the grid is impinged upon by the electron beam through the relative movement between the electron beam and the measuring structure, wherein the stream of back-scattered electrons as a function of the relative movement is converted into an image of the measuring structure and this image is compared to a reference image of the measuring structure as obtained by means of a correctly functioning optical system for an electron beam. --

The first of two claims numbered 36 on page 7 of the applicant's amendment is cancelled.

-- Claim 64 (new). The method of claim 2 wherein the electron beam is a beam of an electron-beam machining device. --

-- Claim 65 (new). The method of claim 6 wherein the electron beam is a beam of an electron-beam machining device. --

-- Claim 66 (new). The method of claim 20 wherein the electron beam is a beam of an electron-beam machining device. --

-- Claim 67 (new). Method in accordance with Claim 2, wherein the opening is one of a slit or a circular hole. --

Authorization for this examiner's amendments was given in telephone interviews with Joseph Kinsella Jr. on 25 May 2005 and 2 June 2, 2005.

***Allowable Subject Matter***

3. Claims 2, 6-15 and 17-67 are allowed.

4. The following is an examiner's statement of reasons for allowance:

With respect to the independent claim 2, the prior art fails to disclose or make obvious a method of measuring the intensity profile of an electron beam in which the electron beam is directed by relative movement between the electron beam and a measuring structure which includes at least one opening which allows the electron beam to pass through and different points of the measuring structure have different

back-scattering properties, wherein a stream of electrons scattered in the reverse direction is measured.

Claims 9-14, 17, 19, 22, 23, 26-33, 36, 37, 53, 61, 64 and 67 are allowed by virtue of their dependency on claim 2.

With respect to the independent claim 6, the prior art fails to disclose or make obvious a method for measuring the intensity profile of an electron beam, in which the electron beam is directed by relative movement between the electron beam and a measuring structure onto different points of the measuring structure which comprises a needle, and at least one back-scattering surface which-rejects the electron beam at least partially, and measuring a stream of electrons scattered in the reverse direction.

Claims 7, 8, 15, 18, 24, 25, 34, 35, 38-49, 51, 52, 54-60, 62 and 65 are allowed by virtue of their dependency on claim 6.

With respect to the independent claim 20, the prior art fails to disclose or make obvious a method for measuring the intensity profile of an electron beam, in which the electron beam is directed by relative movement between the electron beam and a measuring structure on to different points of the measuring structure, which have different back-scattering properties, in the form of a grid, wherein at least a considerable portion of the grid is impinged upon by the electron beam and wherein the stream of back-scattered electrons is converted into an image of the measuring structure and this image is compared to a reference image of the measuring structure as obtained by means of a correctly functioning optical system for an electron beam.

Claims 21, 50, 63 and 66 are allowed by virtue of their dependency on claim 20.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Leybourne whose telephone number is (571) 272-2478. The examiner can normally be reached on M-F 9:00- 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 2, 2005

JJL



NIKITA WELLS  
PRIMARY EXAMINER

06/03/05